

FAST ACQUISITION OF TIMING AND
CARRIER FREQUENCY FROM RECEIVED SIGNAL

ABSTRACT OF THE DISCLOSURE

- 5 A method and apparatus for determining the symbol timing and carrier frequency
of a digitized input signal is disclosed. In one embodiment, the method comprises the
steps of computing a temporally varying magnitude of the input signal, determining a
frequency domain representation of the computed magnitude of the input signal,
identifying a spectral component at a symbol frequency f_s away from a DC component
10 of the frequency domain representation of the computed magnitude of the input signal,
the spectral component having a magnitude and a phase, and determining the symbol
timing phase of the input signal from the phase of the spectral component.

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